California's Health

Vol. 17, No. 23 · Published twice monthly · June 1, 1960

INTRODUCTION TO AN INSTITUTE ON REHABILITATION*

LESTER BRESLOW, M.D., Chief, Bureau of Chronic Diseases
California State Department of Public Health

Too many people in medicine, public health, and hospital administration still do not appreciate what can be accomplished with rehabilitation. Therefore, the first objective of this institute is to establish understanding of the fact that rehabilitation is not a peripheral thing in medicine; it is a core aspect of medicine. Vocational rehabilitation is already quite well established. But the further idea, that medical rehabilitation has a larger goal than a vocational one, has not yet been fully incorporated into our thinking.

First Objective of Institute

Rehabilitation aims at achieving the fullest possible life—in all of its aspects. Hence, rehabilitation is important to people in all age groups, to people with a wide variety of conditions, and to people whose goals for recovery may vary a great deal. For some, it means return to full social life; for others, only to the point of taking care of themselves. There are many degrees of improvement. So the first objective at this institute is to demonstrate the effectiveness of rehabilitation in its many aspects and many degrees.

Second Objective

The second objective is to learn something about the techniques of medical rehabilitation. To master these techniques is not something to be done in two or three days. We don't expect to produce "three-day wonders" in rehabilitation. As a matter of fact, the tour through this hospital today and the presentations over the period of the conference will make clear that some of the techniques are extremely complex. They involve electronics, electroencephalography, engineering, and a great variety of other skills. Certainly we do not hope to teach such things in three days.

While rehabilitation does involve such complexities, much of it is really quite simple. It can be carried on by any medical group, given the will to do so and a little knowledge. Many relatively easy things in rehabilitation can be achieved with modest equipment. There will be an opportunity to observe such things.

We need more than learning; we need to *unlearn* some of what we were taught as young physicians and others in the health professions. I recall only too well the lectures about the value of immobility as a treatment of practically all conditions. If there wasn't much else to do, you could always immobilize. This idea of immobility was so accepted into medical and nursing practice that the people in rehabilitation insist that their chief job is to teach people how to overcome the practices that they learned as young physicians and nurses. The main point is to change our attitude toward patients and our role as physicians and nurses and administrators. We must learn that the job is not to "put the patients to bed" or "keep them happy" or "take care of them" but rather to assist them in making progress toward recovery. The emphasis on activity is troublesome not only to the doctors and nurses but often to the patients. Patients may resent this approach, particularly if they have had the other kind of care for weeks, months, or years. The second objective, then, is to learn something about the techniques of rehabilitation and to unlearn some things we have incorporated into our thinking and practice which lead to "dis-habilitation."

Third Objective

Finally as an objective, we are here to exchange ideas on how to develop rehabilitation programs throughout California and the western states. This larger goal involves administrators and is to improve the way we work together. This is extremely important.

In California, the counties have the responsibility of caring for the sick and infirm who cannot obtain care with their own resources. Over the years, the county hospitals have done a magnificent job, in accordance with the experience and knowledge of the times. At present, rehabilitation programs in California are beginning to spring up, mostly in our county hospitals, but one can count on not too many fingers the number of really outstanding programs in our State.

Physicians in the private practice of medicine are also becoming concerned about rehabilitation. For example, the California Medical Association has established an active Committee on Rehabilitation—with some eager people working on it. They are not only doing things with the state

* Based on remarks made at an Institute on Rehabilitation, Rancho Los Amigos Hospital, Downey, California, September 29-October 1, 1959, sponsored jointly by the California State Department of Public Health and the United States Public Health Service.

medical association, but they also aim to see that every county medical society develops active work on rehabilitation. Rehabilitation is not done in some state office or committee; it is done where the patients are, in the doctors' offices and in the hospitals, public and private. Our California Medical Association Committee on Rehabilitation has started a survey of physician attitudes, asking what doctors think about rehabilitation—a necessary step in the educational process. In this and other efforts the Committee has been working closely with the State Department of Public Health, and we're pleased to have this opportunity to collaborate with them. Now requests are coming from county medical society committees on rehabilitation for the Department to work with them on surveys, resources, and development of programs in the counties. This augurs well for the development of public and private programs in rehabilitation throughout our State. This form of collaboration must be developed between the state and county, public and private agencies, vocational rehabilitation and hospital groups if we are to get on with the job.

It is quite obvious that this rehabilitation is not a job for any one group, any one profession, any one agency, any one level of government. It must be a cooperative thing. In the development of this cooperation we must be quite frank with one another. Nothing is so harmful to the development of true solidarity in developing programs as failure to speak out frankly on some of the fears and misunderstandings that prevail. We should acknowledge that such fears and misunderstandings do exist, and step forward to overcome them. So our third objective is to exchange ideas on means of cooperation to build rehabilitation programs.

Size of the Problem

These are the objectives. Perhaps we ought to consider why these three objectives are important. The first reason is the tremendous burden of disability on the population at the present time. This is growing with the aging of our population. It has already become an outstanding social problem, recognized as such before it was accepted as a medical problem.

Some data from the California Health Survey, a household sample survey of illness in the general population of the state, may illustrate the extent of the problem. This survey only covered people living in homes—not those in hospitals, nursing homes or long-stay institutions.

Out of a thousand persons in the general population, about 100, i.e., 10 percent were reported to have a chronic illness causing some limitation of activity or some interference with their life. Of the same thousand persons, and specifically out of the one hundred who had some degree of limitation of activity, five persons were invalids at home. They had to have someone help them with care, or they could not get around without help. In addition to these, we estimate that there are about five persons per thousand in California who are living in institutions for long-term illness, where they are similarly disabled to the extent that they cannot get around without help. Adding these two groups together—the invalids at home and those in institutions—it is clear that about one percent of our population are invalids. This becomes a rather striking proportion, especially when we think of the growth of the western states and the further aging of the population.

Neglect of Rehabilitation

It is fashionable nowadays to attribute this increasing number of disabled persons to medical advances. People are living beyond the age of infancy and the communicable diseases into later years, when they get "degenerative" diseases and become disabled. Medical science has added years to the lives of people through control of diseases that formerly cut them down in younger life. To a great extent this is true, and we must credit medical science, public health practice, and many other aspects of our society for these advances.

But we who are concerned with rehabilitation in medicine and public health have another responsibility for these invalids and that is the responsibility for medical neglect. Experts in physical medicine or rehabilitation say that a great deal of invalidism, of immobility, of contracture, and limitation of function is due, not to the disease process, but rather to the fact that the patients were medically neglected. I don't mean neglected in the sense that nobody paid attention to them, but neglected in the sense that active physical and medical rehabilitation was not applied in their cases. The idea of immobility still pervades our practice and breeds neglect of rehabilitative efforts.

In California thousands of persons are lying abed in nursing homes and other long-stay institutions (as well as in their own homes) with contractures, loss of motion, loss of bladder function, loss of speech, and many other defects associated with just one condition—hemiplegia. We don't know very much yet about controlling the underlying pathological process of hemiplegia, but we can minimize the disability that occurs when the underlying process occurs. There are other conditions too where medical neglect has been largely responsible for complications leading to disability.

Where does the medical responsibility belong? Obviously, it lies in many places: in the medical profession, medical schools and elsewhere. Several comments preceding our assembly indicated that medical schools are not teaching rehabilitation with the zeal that some of the people here today would like to see it taught. In reply, medical educators point to the tremendous pressure on medical schools to revise curricula in many directions. Emphasis on overcoming physical disability is only one. Nevertheless, we must keep reminding our colleagues in medical schools (and this applies equally to nursing schools, and other professional schools) of the importance of rehabilitation. In the meantime, we can accept the medical challenge where we ourselves are working: in practice, at county hospitals, private hospitals, and public health departments. Thus, one reason that our objectives here are so important lies in the tremendous medical responsibility that faces us.

Cost

Another reason which underlines the importance of our objectives, is cost. Not just the humanitarian cost with which all of us in the health professions are first and foremost concerned, but the downright economic cost of disability—the cost of care as well as the loss in productivity.

In California, the counties spend in direct county tax money about $125,000,000 a year for county hospitals—and this cost is going up year by year. County hospitals provide care for people who have no means of caring for themselves. As more and more people become chronically ill, county hospitals are being converted into long-term institutions. We used to be

proud of getting the average length of stay in the hospital down to eight days or six days. Many private hospitals are still able to do so, but not public hospitals. The average length of stay in public hospitals now is going up because of long-term disability, much of which could be avoided.

The State of California, out of State tax funds, spends over $200,000,000 a year for medical care programs—more than the entire State income from personal income taxes. We are spending millions of dollars in California to construct hospitals, nursing homes and related institutions to care for the chronically ill. Medical costs, as well as hospital, construction, and operating costs, are becoming a substantial item in State and local budgets. So, this is another reason we must be concerned with new ways of tackling the problem of chronic disability.

Many administrators, and especially those directly concerned with budgets, continue to think of institutional costs on a per-patient-day basis. Care is said to cost $6 a day, $12 a day, or $40 a day. To use patient-day costs, as far as chronic illness is concerned, is most misleading. The practice of estimating institutional cost of chronic illness on a per-patient-day basis should be abandoned. What we are concerned about is how much it costs to take care of the patient. If the cost per day is increased two or three times but the duration of stay in an institution is reduced to one-fourth, we are obviously making headway and costs are being curtailed.

Of course, some patients cannot benefit much from intensive care, and we need to make that clear in budget presentations. We need also to emphasize that with fewer days, even at more dollars per day, actual patient costs may come down.

Thus, the medical-economic aspect of chronic disability and its care includes medical responsibility and public economic responsibility.

Collaboration at All Levels

Just a few words about how we have tackled similar problems in the past. In the case of mental illness, the people affected were first put in institutions and given minimal care—passive institutionalization. This has also been done with chronic illness generally. However, growing public and professional interest no longer permits simply waiting until mental illness progresses to the point where the disturbed patient must be put in an institution. In the developing community mental health programs, we are beginning to tackle the problem closer to its roots. In the whole field of chronic disability we should be going into the community with similar programs.

We have made progress against tuberculosis through local administration of services with some financial support from state and federal sources. Major headway against the great health problems of the last few decades has come about through federal, and then state participation in leadership and support. The first dollars for local programs often come from federal or state taxes.

Los Angeles County has a reputation, for leading the way not only in connection with disability, but also in many other aspects of health endeavor. The county has initiated many pilot health programs. State and federal government have something to learn from what is going on here at Rancho Los Amigos Hospital and have the responsibility to help other counties follow the example. A few county hospitals in California have already started.

Passive care of disability is still largely the pattern. We need more aggressive care of persons who are disabled and, even more important, prevention of disability. We can accomplish this by going out into the community and attacking the problem at the roots. The decision lies, of course, in the hands of many people—legislators, budget officials, and others. But, it lies to a great extent in the hands of the people who are here today. We have the task of showing to our top administrators, to legislative representatives, and to the people as a whole, what can be done to control chronic disability.

Santa Barbara Health Departments To Combine in July

As of July 1, 1960, the Santa Barbara County Health Department is taking over the duties of the Santa Barbara City Health Department. Eleven of the present 14 positions in the city health department are being absorbed by the county. Where all employees and facilities will be located has not yet been decided.

Industrial Hygiene Training Course to Be Held

To assist local health departments meet the increasing demand for services to industries in their areas, the fourth annual training course on Elements of Industrial Hygiene for Sanitarians is being presented by the State Department of Public Health, Bureau of Occupational Health, June 13 through 24. It will be held in the State Health Department building in Berkeley.

The occupational Health Division, U.S. Public Health Service, is cosponsoring the program, as it has done for the past three years, and Charles Yaffe, Chief, Program Services, Public Health Service, will be among those presenting technical papers.

Due to restricted laboratory space, enrollment at the entire course is limited to 15 persons. Health officers and other interested local health department staff are urged to attend lectures and laboratory demonstrations, however. Information about the program may be obtained from John Young, Bureau of Occupational Health.

STATE DEPARTMENT OF PUBLIC HEALTH
BUREAU OF HEALTH EDUCATION
2151 BERKELEY WAY
BERKELEY 4, CALIFORNIA

Requests for single copies or for placement on the mailing list may be made by writing to the above address.

Entered as second-class matter Jan. 25, 1949, at the Post Office at Berkeley, California, under the Act of Aug. 24, 1912. Acceptance for mailing at the special rate approved for in Section 1103, Act of Oct. 3, 1917.

STATEMENT ON FLUORIDATION

By the California State Department of Public Health
MALCOLM H. MERRILL, M.D., *Director*

The Department of Public Health has made a thorough study and critical evaluation of the great mass of scientific data concerning the physiological effects of fluorides on the human body and the relationship of fluorides in water to dental caries. Futhermore, the Department has investigated the effect of various amounts of fluoride in water supplies upon the dentition of thousands of school-age children.

As a result, the Department is convinced that many children now growing up in California are deprived of lifelong health protection because their elders have failed to take the necessary action to adjust the fluoride content of public water supplies to the level recommended by responsible medical, dental, and public health scientific organizations. Throughout their lives these children will suffer more tooth decay and will lose more permanent teeth than children who have the good fortune to live in communities where the water contains the optimum amount of fluoride.

Reputable scientific research has proved that the addition of fluoride to water supplies deficient in this mineral is a safe, beneficial, practical, and inexpensive public health measure.

The Department urges all people living in communities where water supplies are deficient in fluoride to take necessary action to remedy this situation as soon as possible.

State Board Reaffirms Stand On Fluoridation

At the April 22nd session in Berkeley, the State Board of Public Health again took a strong stand in favor of fluoridation of public water supplies. They unanimously adopted the following resolution:

WHEREAS the California State Board of Public Health in 1950 adopted the policy of approving the controlled fluoridation of community water supplies as a valuable public health measure in reducing the occurrence of dental caries; and

WHEREAS studies done in California show that dental caries remains one of the most prevalent of diseases affecting the health of the State's population; and

WHEREAS continuing research in the United States and other countries confirms and adds to the great volume of scientific evidence proving the feasibility, effectiveness and economy of this public health measure; and

WHEREAS during the past twenty-five years, critical examination and concientious scientific evaluation of the use of waterborne fluoride at optimum concentration in thousands of United States communities have unequivocally proven the absolute safety of controlled water fluoridation;

THEREFORE BE IT RESOLVED that the California State Board of Public Health reaffirms its previous and continuing policy of approval of controlled fluoridation of public water supplies; and be it further

RESOLVED that the California State Board of Public Health recommends that every California community adjust the fluoride concentration of its water supplies to the optimum concentration as recommended by this Board.

NCPHA Members Again Endorse Fluoridation of Water Supplies

The Northern California Public Health Association, at their annual meeting in Pleasanton May 5, voted unanimously to adopt the following resolution endorsing fluoridation:

WHEREAS fluoridation of public water supplies is in its 16th year as a widely demonstrated method of effectively preventing dental decay, a universal disease, and by as much as 65 percent; and

WHEREAS more than 44,000,000 people (one out of every three) on water distribution systems are supplied with water that has the recommended amount of fluoride naturally or artificially; and

WHEREAS the leading national, state and local health agencies and organizations concerned with health and many others recommend fluoridation; and

WHEREAS the political decision on fluoridation is determined by elected officials or the electorate and no others; Therefore be it

RESOLVED, That the Northern California Public Health Association once again reaffirms its firm endorsement of fluoridation and calls on all city, county, state and federal officials and the public to help bring about fluoridation of all fluoride-deficient water supplies without delay, so that new generations of adults will enjoy the health and economic advantages of better dental health.

Attendance at this year's annual meeting of the Northern California Public Health Association broke all previous records with a registration of over 950.

Air Pollution Control Districts Serve Most of State's Population

Some 80 percent of the State's estimated 15,280,000 people reside in areas which have active air pollution control districts. The Los Angeles Metropolitan Area, with a population approaching six million, has the largest population served, while Riverside, with 270,000 residents, has the least number residing in a control district.

The present seven local air pollution control districts, and the population they include, are as follows:

Los Angeles	5,935,000
San Francisco Bay Area (six counties)	3,263,000
San Diego	1,007,000
Orange County	670,000
San Bernardino	490,000
Sacramento	481,000
Riverside	270,000
Total	12,116,000

District programs range from vigorous efforts to bring all known sources of pollution under control to study programs designed to evaluate air quality, meteorological conditions, and air pollution sources so that future control practices will be appropriate to local conditions. In Los Angeles, where the seriousness of the problem has necessitated an all-out effort, the administrative, research, and control patterns have strongly influenced activities and programs in other air pollution districts of the State.

Sacramento is the most recent area to activate an air pollution control district. That district was established in December, 1959, with Dr. Ira O. Church, Sacramento County Health Officer, appointed as Air Pollution Control Officer.

The San Joaquin Air Pollution Control District, including eight counties with an estimated population of 1,359,400, was authorized by the legislature during 1959, but will not be activated until approved by a vote of the people at the general election in November, 1960. If the district is approved, this will increase the number of counties included in districts to twenty and the coverage to about 88 percent of the estimated State population.

The saliva of a rabid dog may be infectious as long as 12 days before symptoms appear.—*This Week*, Massachusetts Dept. of Public Health, Vol. 8, No. 50.

Public Health Nurses Still in Short Supply

The number of nurses employed in the schools of California continues to increase more rapidly than those employed by health departments and visiting nurse associations.

The annual count of nurses employed in public health shows a continuance of the trend begun in 1952. Between 1940 and 1952 the number of nurses in health departments exceeded those in schools. Since 1952, however, there has been a continuing sharp increase in the number of school nurses. Of the 3,476 nurses now employed in public health, 1,910 are in schools, 1,292 are in health departments, 243 are employed by visiting nurse associations and 31 by the State Departments of Public Health and Mental Hygiene.

The count of occupational health nurses is being completed and will be reported in a later issue of *California's Health*.

During the past year 484 nurses left the field of public health through retirement, death, and leaving for other positions. These have been replaced, and 169 additional nurses have been employed. Of the additional nurses, 119 are working in schools, 27 in health departments, and 23 in visiting nurse associations. Although there has been a slight increase in the number of visiting nurse associations, there are still 38 counties which do not have an organized plan for the part-time nursing care of the sick in the home.

There has been very little improvement in the percentage of employed nurses who have completed preparation in public health, and the number of vacancies remains at about 100.

Table I shows the nurses employed by position and type of agency. Table II shows the educational qualifications of these nurses.

TABLE I
NURSES EMPLOYED IN PUBLIC HEALTH
CALIFORNIA, JANUARY 1, 1960

TYPE OF AGENCY	Number of Agencies	NURSES						
		Total	Administrative and Supervisory					Staff
			Total	Directors	Assistant Directors	Educational Directors and Consultants	Supervisors	
All Agencies	592	3,476	348	144	14	44	146	3,128
State Agencies	4	31	21	1	2	17	1	10
Department of Public Health	1	28	21[a]	1	2	17[a]	1	7[b]
State Hospitals	3	3						3
Local Agencies	588	3,445	327	143	12	27	145	3,118
Departments of Health	48	1,292	199	48	12	22	117	1,093
Boards of Education	510	1,910	91	74		3	14	1,819
Visiting Nurse Associations	30	243	37	21		2	14	206

[a] Includes one consultant in Medical Health Division, California Disaster Office.
[b] Nurses assigned to local jurisdictions by Bureau of Public Health Contract Services.
SOURCE: State of California, Department of Public Health Nursing Records.

TABLE II
EDUCATIONAL QUALIFICATIONS OF NURSES EMPLOYED IN PUBLIC HEALTH
CALIFORNIA, JANUARY 1, 1960

EDUCATIONAL QUALIFICATIONS	TOTAL NURSES		ADMINISTRATIVE AND SUPERVISORY										STAFF	
			Total		Directors		Assistant Directors		Educational Directors, Consultants		Supervisors			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Nurses Employed	3,476	100.0	348	100.0	144	100.0	14	100.0	44	100.0	146	100.0	3,128	100.0
Program Approved for Public Health Nursing														
Completed	1,836	52.8	263	75.6	85	59.0	14	100.0	41	93.2	123	84.2	1,573	50.3
Not completed	1,640	47.2	85	24.4	59	41.0			3	6.8	23	15.8	1,555	49.7
College Degrees														
One or more	1,999	57.5	256	73.6	94	65.3	14	100.0	41	93.2	107	73.3	1,743	55.7
None	1,477	42.5	92	26.4	50	34.7			3	6.8	39	26.7	1,385	44.3

SOURCE: State of California, Department of Public Health Nursing Records.

Dr. W. E. Reynolds Joins Division of Research

William E. Reynolds, M.D., M.P.H., has joined the staff of the Division of Research of the California State Department of Public Health to supervise its epidemiologic training program. Under this program, which is financed largely by the National Institutes of Health, post-doctoral and pre-doctoral students in fields such as medical epidemiology, statistics, and social sciences, are given advanced training and field experience in epidemiologic research.

Another part of the program gives selected medical students an introduction to public health through a summer training program in which they participate in projects carried on by the Department.

Dr. Reynolds graduated from the College of Puget Sound in Washington with a B.S. degree in 1940, and received his M.D. from the University of Chicago in 1943. After his internship at Los Angeles County General Hospital and four years of active military service, he received his M.P.H. degree, cum laude, from Harvard School of Public Health.

Since then he has served as Research Fellow in Medicine at Massachusetts General Hospital and Harvard Medical School, as Assistant Professor of Preventive Medicine, Harvard Medical School, and as Senior Research Fellow of the national Arthritis and Rheumatism Foundation. He was most recently employed as Professor and Executive Officer, Department of Public Health and Preventive Medicine, University of Washington School of Medicine.

California Members of APHA Committees Announced

The American Public Health Association has announced this year's appointments to committees of the association. Elections to Association councils were announced shortly after the 87th Annual Meeting and Californians elected were listed in the November 15, 1959, issue of *California's Health*. A few not announced at that time are listed below with the Californians appointed to committees.

Harold M. Erickson, M.D., Deputy Director of Health, California State Department of Public Health, Berkeley
Elective councilor, Governing Council, two-year period
Member, Standing Committee on Affiliated Societies and Regional Branches

Lester Breslow, M.D., Bureau of Chronic Diseases, California State Department of Public Health, Berkeley
Chairman, Program Area Committee on Chronic disease and Rehabilitation
Elective councilor, Governing Council, two-year period

Ruth L. Huenemann, D.Sc., Associate Professor of Nutrition, University of California School of Public Health, Berkeley
Member, Food and Nutrition Section Council
Elective councilor, Governing Council, two-year period

Jessie M. Bierman, M.D., Professor of Maternal and Child Health, University of California School of Public Health, Berkeley
Member, Standing Committee on Professional Education

Dwight M. Bissell, M.D., San Jose City Health Officer.
Member, Program Area Committee on Accident Prevention

Henrik L. Blum, M.D., Health Officer, Contra Costa County Health Department, Martinez
Member, Program Area Committee on Chronic Disease and Rehabilitation

Robert Dyar, M.D., Chief, Division of Research, California State Department of Public Health, Berkeley
Chairman, Standing Committee on Research Policy

Alan Foord, M.D., Director, School Health Services, Berkeley Public Schools
Member, Program Area Committee on Child Health

Irving Gordon, M.D., Professor and Chairman, Department of Medical Microbiology, University of California School of Medicine, Los Angeles
Member, Laboratory Section Council

Frank M. Stead, Chief, Division of Environmental Sanitation, California State Department of Public Health, Berkeley
Chairman, Program Area Committee on Environmental Health

William W. Stiles, M.D., Professor of Public Health, University of California School of Public Health, Berkeley
Member, Program Area Committee on Health Services in Disaster

Jacob Yerushalmy, Ph.D., Professor of Biostatistics, University of California School of Public Health, Berkeley
Member, Statistics Section Council

Tetanus Highly Fatal In California

Although small in incidence, tetanus continues to be a highly fatal disease in California. In 1959 there were 43 cases reported, with 22 deaths.

Many victims of tetanus are urban-suburban residents and not the rural dweller traditionally associated with the disease. The cases were reported from areas such as Los Angeles, Pasadena, Long Beach, Sacramento, Alameda and Santa Barbara.

A study of the nature of injury and type of wound indicates the majority of the cases occurred as the result of home injuries. The most frequent injuries were puncture wounds caused by nails, toys, and splinters in the course of home repair work, gardening, and yard cleaning. Other injuries included "lacerated fingers while operating power lawn mower," "cut hands in electric fan blades," "caught hand in food chopper," "sores on hand while repairing house," "laceration of arm on lawn sprinkler," "dropped furniture on foot," and "finger caught in washing machine wringer."

More than 90 percent of the patients had not been immunized with tetanus toxoid or had not received a booster injection within five years of onset. The causative organism of tetanus is a natural inhabitant of soil and of the intestinal tract of man and animals, so perpetual reseeding of these organisms occurs in man's environment.

Universal immunization with tetanus toxoid provides the potential means of protection. The occurrence of tetanus can be considered to be the result of what has been termed "unassimilated progress." An effective vaccine is available, but it has not been used on the broad scale desirable for protection of the civilian population. The armed services routinely protect their personnel by tetanus immunization.

The possibility of pollution of wells has been increased with the use of detergents in household sewage disposal systems inasmuch as detergents possess the faculty of traveling far greater distances underground than was the case with soaps.—*Weekly Health Bulletin, Conn. State Dept. of Public Health, Vol. 42, No. 3.*

Role of Water in Transmission Of Viral Diseases

A Public Health Service bulletin, *Research in Water Supply and Water Pollution at the Robert A. Taft Sanitary Engineering Center*, contains the following statement concerning viruses in water:

"Several years ago the Sanitary Engineering Center began studies on the occurrence and persistence of viruses in water and sewage and the removal of viruses by conventional treatment processes. The resistance of enteric viruses to chlorine appears to be variable. For example, a strain of Coxsackie A2 virus required 10-50 times as much free chlorine for inactivation as was required to kill *E. coli* bacteria. On the other hand, Adenovirus type 3 was inactivated by chlorine as readily as *E. coli* cells. Wide differences have also been observed in the amounts of iodine required to inactivate different viruses in water. The survival time of Coxsackie virus in various waters has been observed to be as long as 47 days in grossly polluted water; survival times appeared to be directly related to the degree of pollution. Detailed experiments on the effectiveness of alum or ferric chloride flocculation as a method of removing viruses from water showed that more than 95 percent of added Coxsackie virus could be removed by careful flocculation.

"Investigations of the following problems are currently in progress or in proposal.

a. The effectiveness of sewage treatment processes in removing selected enteric viruses from sewage.
b. The relative survival times of coliform and enterococci bacteria and certain enteric viruses in various waters.
c. The relative resistance of coliform and enterococci bacteria and certain enteric viruses to chlorine.
d. Development of better methodology for the enumeration of virus in water and sewage.
e. Development of a laboratory method for the cultivation of the virus of infectious hepatitis."

As recently as 1920 infectious diseases were responsible for nearly half of the deaths in this county.—*This Week*, Massachusetts Dept. of Public Health, Vol. 8, No. 50.

Change in Name for Bureau Of Public Health Nursing

Bureau of Nursing is the new title for the former Bureau of Public Health Nursing of the State Department of Public Health.

Dr. Malcolm H. Merrill, State Director of Public Health, authorized the change to be effective from May 1.

The change in name was made to reflect more accurately the Department's responsibilities since these are not limited to the field of public health nursing. The Department is concerned with the availability and quality of nursing services to people wherever they may be in the community, in homes, institutions, schools, or places of employment, and with the education of nurses for these services.

The responsibilities of the Bureau of Nursing include coordination of nursing activities within the State Department of Public Health and assisting local agencies and institutions in their efforts to improve the quality and increase the quantity of nursing services.

The Bureau of Nursing remains in the Division of Community Health Services.

U.C. Researchers Measure Smoke Inhalation Effect

Ten inhalations of cigarette smoke approximately double airway resistance—that is, the extent to which the bronchial tree restricts free passage of air in and out of the lungs.

These findings from a study supported in part by the California State Department of Public Health and the Tobacco Industry Research Committee have been reported by Drs. Jay A. Nadel, Donald F. Tierney and Julius H. Comroe Jr. of the Cardiovascular Research Institute at the University of California Medical Center in San Francisco. They studied 36 healthy volunteers and 22 patients with heart and lung diseases, and found that the effect on airway resistance was immediate and lasted about an hour.

Substantial changes in airway resistance may occur without being noticeable to the patient or the examining physician. Resistance is increased when bronchial tubes are narrowed.

Use of the body plethysmograph, an elaborately instrumented chamber for measuring a variety of lung functions, permits measurement of airway resistance uncomplicated by other effects. It can record changes too small to be detected by other methods.

Results were similar in healthy and diseased subjects, in smokers and non-smokers, and with cigarettes of high and low nicotine content. Smoking a pipe, cigar or cigarette without inhaling did not affect airway resistance. The effect of inhaled smoke could be prevented or reversed by having the subject breathe a mist of isoproterenol, a bronchodilator drug. Mists of dilute nicotine had no effect.

The U.C. researchers suggest that the inhalation of very fine particles—rather than any specific chemical in the smoke—causes a narrowing of the smaller airways. The mechanisms responsible for these changes are being sought in further studies. The possible relationships of the findings to disease are not known.

Reported Cases of Selected Notifiable Diseases California, Month of April 1960

Disease	Cases reported this month			Total cases reported to date		
	1960	1959	1958	1960	1959	1958
Series A: By place of report						
Amebiasis	34	63	132	133	185	562
Coccidioidomycosis	22	16	22	93	87	68
Measles	4,200	10,135	7,895	10,545	24,893	17,422
Meningococcal infections	15	19	16	89	92	78
Mumps	2,839	1,846	2,821	10,298	5,814	9,118
Pertussis	127	265	401	483	829	1,201
Rheumatic fever	26	10	13	55	48	58
Salmonellosis	75	74	80	318	299	259
Shigellosis	123	159	163	547	503	484
Streptococcal infections, respiratory	2,595	2,543	1,675	13,376	9,236	5,060
Trachoma	7	—	—	7	21	1
Series B: By place of residence						
Chancroid	12	3	8	48	24	31
Conjunctivitis, acute newborn	3	—	1	8	3	9
Gonococcal infections	1,400	1,474	1,489	6,121	5,326	5,868
Granuloma inguinale	1	—	3	5	—	4
Lymphogranuloma venereum	3	5	4	12	12	16
Syphilis, total	626	716	638	2,571	2,220	2,278
Primary and secondary	118	116	47	481	337	154
Series C: By place of contraction						
Botulism	—	—	—	—	2	—
Brucellosis	1	2	3	5	6	11
Diarrhea of the newborn	—	—	—	6	7	16
Diphtheria	—	—	1	—	1	3
Encephalitis	52	50	50	168	135	155
Food poisoning (exclude botulism)	189	147	36	498	530	308
Hepatitis, infectious	315	238	229	1,203	911	732
Hepatitis, serum	9	6	13	31	22	39
Leprosy	—	3	2	4	6	3
Leptospirosis	—	1	—	—	2	2
Malaria	—	1	—	—	9	2
Meningitis, viral or aseptic	36	30	NA	133	130	NA
Plague	—	—	—	—	—	—
Poliomyelitis, total	10	17	9	59	59	48
Paralytic	9	15	5	51	50	28
Nonparalytic	1	2	4	8	9	20
Psittacosis	—	2	2	8	7	8
Q fever	8	3	2	15	6	4
Rabies, animal	13	11	31	52	28	64
Rabies, human	—	—	—	—	—	—
Relapsing fever (tick borne)	—	—	—	—	—	—
Rocky mountain spotted fever	—	1	—	—	1	—
Tetanus	—	3	2	3	13	10
Trichinosis	1	1	—	1	2	1
Tularemia	—	—	—	1	—	1
Typhoid fever	3	6	7	15	20	20
Typhus fever (endemic)	—	—	—	—	—	1
Other *	—	—	—	—	—	—
Tuberculosis [1]	—	—	—	1,743	1,915	2,262

* This space will be used for any of the following rare diseases if reported: Anthrax, Cholera, Dengue, Relapsing Fever (louse borne), Smallpox, Typhus Fever (epidemic), Yellow Fever.

[1] Tuberculosis cases are corrected to exclude out-of-state residents and changes in diagnosis.

Public Health Positions

Alameda County

Health Educator: Half-time position. Salary range, $241-$292. Position available July 1. To work in the field of public education about the alcoholic and his problems, prognosis, and methods of treatment available. Requires MPH in Public Health plus one year health education experience. For more information inquire of Alameda County Civil Service, 12th and Jackson, Oakland 7, HI 4-0844, ext. 256.

Humboldt-Del Norte County

Public Health Nurse Supervisor: Salary range, $491-$614; one step increase after six months. Preparation in supervision and California PHN certificate required.

Public Health Nurse: Salary range, $439-$549; advance to second step after six months; county car furnished. Generalized program, including school nursing. Requires California PHN certificate. Apply to Virginia Nelson, Director of Public Health Nursing, Humboldt-Del Norte County Health Department, 805 Sixth Street, Eureka, California.

Personals

Richard L. Peters, Chief of the Bureau of Vector Control, State Department of Public Health, was elected chairman of the newly established Public Health Vector Control Conference composed of representatives of state and territorial agencies.

Mrs. Olive Klump, Director, Bureau of Public Health Nursing, Los Angeles County Health Department, has been elected to a four-year term on the Board of Directors of the American Nurses' Association.

MEETINGS SCHEDULED

June 1-4—American Assn. of Bioanalysts and California Assn. of Clinical Laboratories, Joint Annual Meeting, San Francisco

June 11—Western Gerontological Society Annual Meeting, Los Angeles

June 13—American Assn. of Rehabilitation Therapy. Annual Meeting, Santa Monica

June 26 - July 1—National Education Assn. Annual Meeting, Los Angeles

July 18-21—National Assn. of Sanitarians, Annual Meeting, San Francisco

August 7-14—International Congress of Gerontology, San Francisco

August 21-26—American Assn. Blood Banks. Annual Meeting, San Francisco

August 29 - September 1—American Hospital Assn., Annual Meeting, San Francisco

October 3-4—Governor's Conference on Aging, Sacramento

October 7-9—Fourth Western Industrial Health Conference, San Francisco
—Western Industrial Medical Association Annual Meeting, San Francisco

October 14-18—Amer. Occupational Therapy Assn., Annual Meeting, Los Angeles

The risks of long-term chronic illness of the aged require special types of medical services; early diagnosis and preventive medical attention, long-term rehabilitative care, medical social services, long-term semi-custodial care.—*Fact Sheet on Health Services for the Aged,* U.S. Senate Subcommittee on Problems of the Aged and Aging.

Birth Certification for Foreign Born Child Now Available

The State Department has inaugurated a new form which may be issued for any child born in a foreign country who acquired United States citizenship at birth and whose birth was registered with the proper United State consular office.

The birth certification, form DS-1350, may be issued in the name the child was legally known by when the birth was registered with the United States consular officer, or in the name the child is legally known by when the certification is requested. Thus, if a child has been adopted or legitimated, it is possible to obtain the certification in the new name when proper evidence of the adoption or legitimation is or has been submitted to the Passport Office, Department of State.

Applications for the Certification of Birth form should be made by letter directed to the Authentication Officer, U.S. Department of State, Washington 25, D.C. A fee of $2.50 must be enclosed in the form of a money order or check drawn on a United States bank and made payable to the Department of State.

In the future, when the birth is registered with the United States consular officer, the parent may obtain this certification free of charge at the time of registration.

printed in CALIFORNIA STATE PRINTING OFFICE

18300-G 6-60 10M